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Assessment of Financial Inclusion-Gender-Welfare Nexus among Smallholder Maize Farmers in Nigeria

By

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Fig 3: Pictures after training of women on STM

5. RESULT AND DISCUSSION

- Female farmers are better in saving plans and financial capability while male farmers are more financially inclusive and well-being (Fig 2).
- The age of the farmer, number of employed persons, land tenure, and location of the female-headed households are determinants of Financial Inclusion (Table !).
- Financial inclusion significantly influences the welfare status of both male and female farmers positively (Table 2).

Fig 1: Conceptual Framework

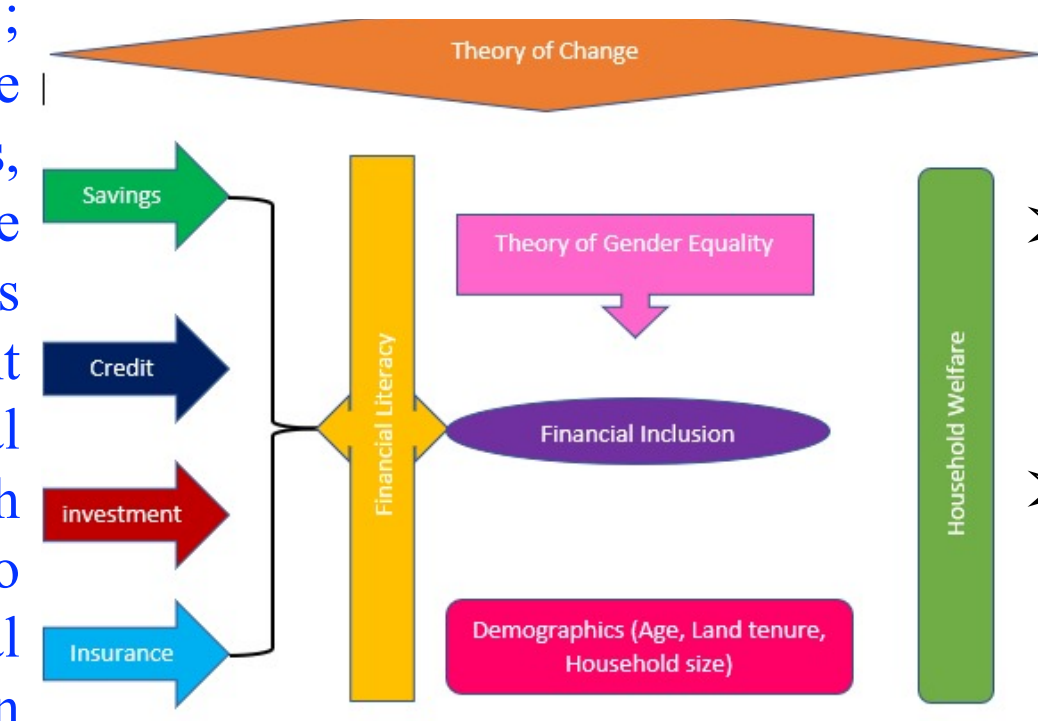
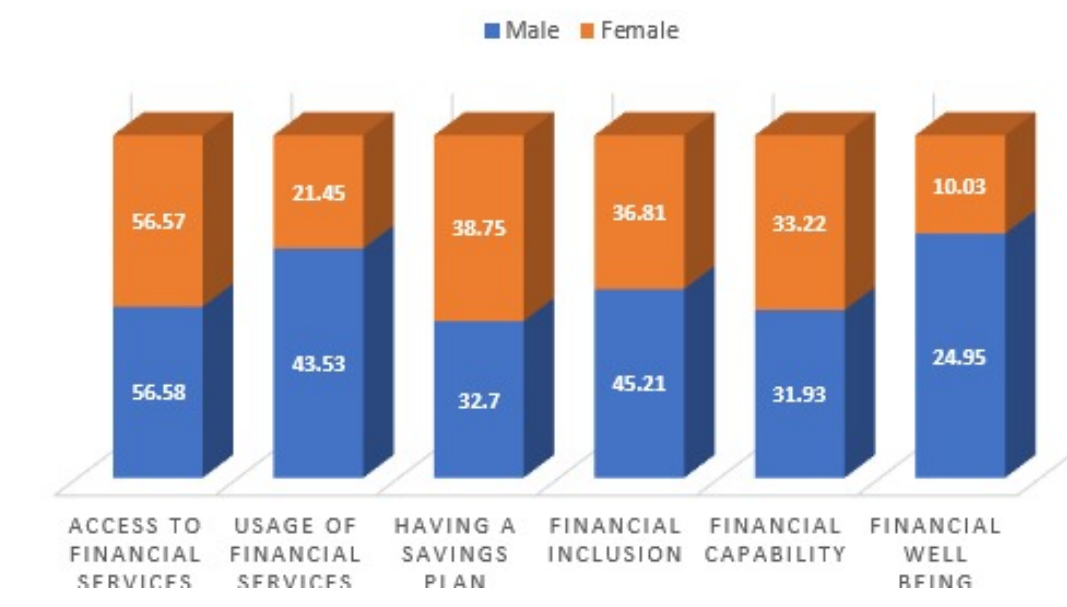


Fig 2: MULTIDIMENSIONAL FINANCIAL INCLUSION INDEX



- 4. Data Analytical Tools
- Multidimensional financial Inclusion index
- Logit Regression and seemingly unrelated regression (SUR) model

6. Policy Implication

Policies and programs that will contribute to increasing financial inclusion and better welfare status of male and female farmers such as increasing farmers' access to financial services, especially digital and point of sale (POS) services in rural areas, as well as sensitization programs on financial literacy and financial products should be implemented. Employment and land tenure system need to be considered to ensure a reduction in the gender gap of financial inclusion.

Further Readings

Ayinde OE, Olarewaju AO, Miranda MJ, Omotesho KF, Ayinde K, 2023. Assessment of the financial inclusion-gender-welfare nexus among smallholder maize farmers in Nigeria. *African Journal of Agricultural and Resource Economics* (18) 3:249-264. <https://afjare.org/category/volume-18-3/>

1. Introduction

Smallholder farmers contribute the majority of national agricultural production (Fowowe, 2020). The agricultural sector, especially smallholder farmers, constitutes the largest share of financially excluded persons in Nigeria (EFINA, 2017; Fowowe, 2020). In addition, cultural norms and market practices can constrain are the smallholder female farmers. These farmers face constraints on rural credit and insurance, along with the high interest rates imposed by financial institutions, which pose significant challenges to agricultural financing in Nigeria. Policy interventions have brought about an increase in agricultural lending in the country from 1% in 2011 to 6% in 2015. Nevertheless, access to agricultural credit remains critically low and poses a major challenge for stakeholders in the agricultural sector (Mishra et. al, 2021). The recent spiking of agricultural input (fertiliser, herbicides, and labour) prices globally is expected to contribute to low agricultural production and food security. This calls for more financial support for smallholder farmers, who are mostly faced with high input costs and are unable to recoup because of comparatively low market prices for their produce and a need to ensure a gender balance in financial inclusion among smallholder farmers in Nigeria. There is a dearth of empirical evidence on the nature of financial inclusion among smallholder farmers and how gender differences in financial inclusion among smallholder farmers in Nigeria could be linked to household welfare.

2. Objectives

- ✓ identify the financial inclusion and welfare of smallholder maize farmers based on gender, status
- ✓ identify the determinants of the financial inclusion of smallholder maize farmers based on gender, and
- ✓ examine the effects of financial inclusion on smallholder farmers' household welfare.

3. Methodology

- The study Area: Nigeria
- Three stage random Sampling
- Baseline data of total sample of three thousand (3544) farmers
- This selection was based on the household head status of the respondents, and included both male and female household heads

Table 2a Seemingly Unrelated Regression (SUR) estimate results of the influence of financial inclusion on welfare among male headed household

Variables	Access	Employment	Water	Expenditure	Asset
Age	0.002*** (0.000)	0.0021*** (0.000)	0.001* (0.000)	0.002*** (0.000)	0.001** (0.000)
Education	0.002** (0.001)	0.003 (0.001)	-0.001 (0.001)	0.001*** (0.002)	0.002 (0.001)
Household size	0.004 (0.003)	0.034*** (0.003)	0.004* (0.003)	0.005*** (0.000)	0.010*** (0.002)
Dist. to market	-0.005*** (0.001)	0.002 (0.001)	0.001 (0.001)	-0.001 (0.000)	0.002*** (0.001)
Farm size	0.002 (0.004)	-0.007 (0.005)	-0.008* (0.004)	0.003*** (0.001)	-0.009*** (0.003)
Yield	-6.34e-07 (6.75e-07)	1.90e-07 (7.64e-07)	-3.65e-07 (6.98e-07)	3.43e-07*** (1.08e-07)	-2.28e-07 (4.85e-07)
Access to internet	-0.007 (0.015)	0.031* (0.017)	0.060*** (0.015)	0.013*** (0.002)	0.093*** (0.011)
Financial Inclusion	0.144*** (0.011)	0.060*** (0.012)	0.027** (0.011)	0.011*** (0.002)	0.058*** (0.008)
Land tenure	-0.022** (0.011)	0.0364*** (0.013)	-0.019* (0.011)	0.005*** (0.002)	-0.024*** (0.008)
Household income	0.003 (0.007)	0.089*** (0.007)	0.003 (0.007)	0.012*** (0.001)	0.029*** (0.005)
Extension agent	0.034*** (0.012)	-0.083*** (0.013)	0.015 (0.012)	-0.004 (0.002)	0.047*** (0.008)
Ecology	-0.072 (0.007)	-0.062 (0.007)	-0.119*** (0.007)	0.005*** (0.001)	0.033*** (0.005)
Constant	0.742 (0.085)	-0.967 (0.096)	0.673*** (0.088)	-0.168*** (0.014)	-0.041 (0.061)
RMSE	0.278	0.315	0.288	0.044	0.200
R-squared	0.129	0.172	0.114	0.183	0.135
Chi2	442.38	617.35	381.22	666.22	460.92
p > chi2	0.000	0.000	0.000	0.000	0.000

Table 2b: Seemingly Unrelated Regression (SUR) estimator results of the influence of financial inclusion on welfare among female headed household

Variables	Access	Employment	Water	Expenditure	Asset
Age	0.003 (0.001)	-0.002 (0.000)	-0.001 (0.001)	0.005*** (0.001)	0.001 (0.001)
Education	0.001 (0.002)	0.003 (0.000)	0.004 (0.003)	-0.005 (0.003)	0.005* (0.003)
Household size	0.015*** (0.005)	0.004*** (0.001)	0.011 (0.008)	0.062*** (0.008)	0.012* (0.007)
Dist. to market	0.003 (0.002)	-0.003 (0.000)	0.003 (0.003)	0.002 (0.003)	-0.004* (0.002)
Farm size	0.003 (0.008)	0.001 (0.001)	-0.045 (0.013)	0.005 (0.013)	-0.008 (0.012)
Yield	-1.71e-06** (8.38e-07)	4.20e-08 (1.29e-07)	-2.54e-07*** (1.41e-06)	-3.71e-07 (1.40e-06)	1.23e-07 (1.30e-06)
Access to internet	0.114 (0.073)	0.020* (0.011)	-0.051 (0.122)	-0.156 (0.122)	-0.400*** (0.113)
Financial Inclusion	0.060*** (0.015)	0.001 (0.002)	-0.015 (0.026)	0.052** (0.026)	0.140*** (0.024)
Land tenure	-0.012 (0.017)	-0.001 (0.003)	0.009 (0.029)	0.001 (0.029)	-0.019 (0.027)
Household income	0.033*** (0.010)	0.011*** (0.002)	0.004 (0.017)	0.095*** (0.017)	-0.027* (0.015)
Extension agent	0.012 (0.018)	-0.005* (0.003)	0.064** (0.031)	-0.075** (0.031)	0.011 (0.029)
Ecology	0.038*** (0.010)	0.003* (0.002)	-0.102*** (0.016)	-0.030* (0.016)	-0.092*** (0.015)
Constant	-0.147 (0.128)	-0.115*** (0.020)	0.706*** (0.214)	-1.259*** (0.214)	1.172*** (0.198)
RMSE	0.174	0.027	0.292	0.291	0.270
R-squared	0.128	0.194	0.108	0.194	0.151
Chi2	85.05	138.88	69.80	138.94	102.93
p > chi2	0.000	0.000	0.000	0.000	0.000